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File Code: 3410 **Date:** January 7, 2002
Route To: (02-FOR-013)

Subject: Douglas Fir Tussock Moth Early Warning

To: Forest Supervisors, Coconino NF, Coronado NF, Prescott NF, Tonto NF

Douglas-fir tussock moth (dftm), *Orgyia pseudotsugata,* is a native defoliator of major importance in the mixed-conifer, Douglas fir and true fir forests of the interior west. Outbreaks can result in heavy defoliation, growth reduction, top kill, and considerable tree mortality. Additionally, hairs from the egg, larval, and pupal stages are irritating to some individuals and may cause asthma symptoms or severe skin rashes. The insects are seldom noticed between outbreaks, but high population levels can be reached very quickly. An early warning detection system was developed to provide 1 to 2 years advance notice of impending outbreaks to land managers.

Used widely throughout the western United States, the program has been in place in Arizona since 1992. A system of pheromone traps is placed annually at several locations throughout the state. Trap placement precedes the emergence of adult male dftm. The pheromone used is selective for this insect species. Locations were chosen based on historic outbreaks or site susceptibility due to an extensive stand of appropriate host type. Any plot where the trap catch exceeds 40 moths/trap indicates an imminent outbreak.

In 2001, trapping systems were located along the Mogollon Rim near Payson, Catalina Mountains, Pinaleño Mountains, Sierra Ancha Mountains, and the Pinal Mountains. Trapping in the Bradshaw Mountains was discontinued due to lack of activity. No moths were caught during the three years that traps were placed in these locations. The early warning detection trapping in Arizona is coordinated by the Arizona Zone Office, in cooperation with the Safford RD of the Coronado NF and the Arizona State Land Department. This letter will serve to report the findings of the 2001 trapping season to appropriate land managers.

Survey results from 2001 (Table 1) indicate that the outbreak in the Pinal Mountains near Globe, AZ, is continuing for the third year (refer to 3410 letters of 1/11/99, 1/3/00, and 12/29/00). This outbreak is following the usual pattern for a population of this insect. The population peak occurred in 1999/2000, and a decline was seen in 2001. There were signs of insect feeding, but no visible defoliation was seen in 2001. A further decline would be expected in 2002. Moth catches on West Peak in the Pinaleños declined this year as well. Other trap locations continue to yield below-threshold moth counts. There has been a decrease in the total moth count in 2001 (632) from 2000 (1010).

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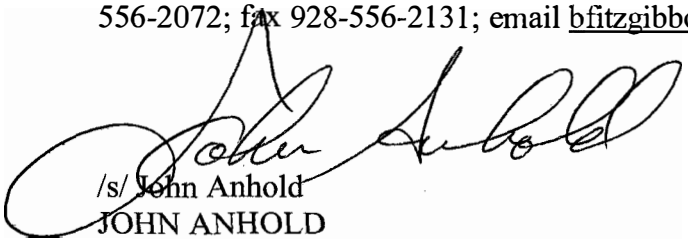
Table 1. 2001 Tussock Moth Trap Results.

PLOT NAME	PLOT LOCATION	TOTAL MOTHS 2000	AVERAGE NUMBER OF MOTHS/TRAP 2000	TOTAL MOTHS 2001	AVERAGE NUMBER OF MOTHS/TRAP
Baker Butte	Mogollon Rim	4	0.8	32	6.4
Washington Park	Mogollon Rim	55	11	34	6.8
Marshall Gulch	Catalina Mtns.	1	0.2	2	0.4
Lemon Rock	Catalina Mtns.	0	0	3	0.6
West Peak	Pinaleño Mtns.	160	32	140	28
Cunningham	Pinaleño Mtns.	0	0	13	2.6
Spruce Mountain	Bradshaw Mtns.	0	0	No data	No data
Potato Patch	Bradshaw Mtns.	0	0	No data	No data
Workman Creek	Sierra Ancha Mtns.	15	3	15	3
Reynolds Creek	Sierra Ancha Mtns.	21	4.2	17	3.4
Icehouse	Pinal Mtns.	434	86.8	202	40.4
Lower Pinal	Pinal Mtns.	320*	64	174	34.8

* One of the traps had been removed and was found on the ground. Weather impacts could have lowered the moth count in this trap.

If you have any questions or concerns about these data, please contact Bobbe Fitzgibbon at 928-556-2072; fax 928-556-2131; email bfitzgibbon@fs.fed.us.



/s/ John Anhold
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